

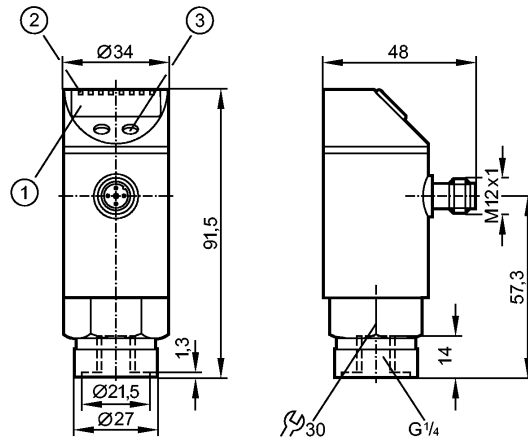


PY9293

PN-025-RBR14-QFPKG/US/ IV



Pressure sensors



- 1: 4-digit alphanumeric display
- 2: LEDs (display unit / switching status)
- 3: Programming button



Product characteristics

Electronic pressure monitor

Quick disconnect

Function programmable

Process connection: G 1/4 I

2 outputs

OUT1 = switching output

OUT2 = switching output or diagnostic output

4-digit alphanumeric display

Measuring range: 0...25 bar / 0...363 psi / 0...2.5 MPa

Application

Application	Type of pressure: relative pressure Liquids and gases		
Pressure rating	150 bar	2175 psi	15 MPa
Bursting pressure min.	350 bar	5075 psi	35 MPa
Medium temperature [°C]	-25...80		

Electrical data

Electrical design	DC PNP/NPN
Operating voltage [V]	18...36 DC ¹⁾
Current consumption [mA]	< 50
Insulation resistance [MΩ]	> 100 (500 V DC)
Protection class	III
Reverse polarity protection	yes
Oversvoltage protection [V]	up to 40 V

Outputs

Output	2 outputs OUT1 = switching output OUT2 = switching output or diagnostic output
Output function	2 x normally open / closed programmable or 1 x normally open / closed programmable + 1 x normally closed (diagnostic function)
Current rating [mA]	250
Voltage drop [V]	< 2



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Pressure sensors

Short-circuit protection	yes (non-latching)
Switching frequency [Hz]	≤ 170

Measuring / setting range

Measuring range	0...25 bar	0...363 psi	0...2.5 MPa
Setting range			
Set point, SP	0.2...25.0 bar	4...362 psi	0.02...2.50 MPa
Reset point, rP	0.1...24.9 bar	2...360 psi	0.01...2.49 MPa
in steps of	0.1 bar	2 psi	0.01 MPa

Accuracy / deviations

Accuracy / deviations (in % of the span)	
Switch point accuracy	< ± 0.5
Characteristics deviation *)	< ± 0.5
Hysteresis	< ± 0.25
Repeatability **)	< ± 0.1
Long-term stability ***)	< ± 0.05
Temperature coefficients (TEMPCO) in the temperature range -20...80° C (in % of the span per 10 K)	
Greatest TEMPCO of the zero point	0.2
Greatest TEMPCO of the span	0.2

Reaction times

Power-on delay time [s]	0.3
Delay time programmable dS, dr [s]	0; 0.2...50
Integrated watchdog	yes

Software / programming

Programming options	hysteresis / window function; N.O. / N.C; diagnostic function; output polarity; on delay, off delay; damping; display unit
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Environment

Ambient temperature [°C]	-20...80 (UB < 32 V) / -20...60 (UB > 32 V)
Storage temperature [°C]	-40...100
Protection	IP 65

Tests / approvals

EMC	EN 61000-4-2 ESD: 4 kV CD / 8 kV AD EN 61000-4-3 HF radiated: 10 V/m EN 61000-4-4 Burst: 2 kV EN 61000-4-5 Surge: 0.5/1 kV EN 61000-4-6 HF conducted: 10 V
Shock resistance	DIN IEC 68-2-27: 50 g (11 ms)
Vibration resistance	DIN IEC 68-2-6: 20 g (10...2000 Hz)
MTTF [Years]	219

Mechanical data

Process connection	G ¼ I
Materials (wetted parts)	stainless steel (303S22); ceramics; FPM (Viton)
Housing materials	stainless steel (304S15); stainless steel 316L / 1.4404; PC (Makrolon); PBT (Pocan); PEI; FPM (Viton); PTFE
Switching cycles min.	100 million
Weight [kg]	0.261

Displays / operating elements



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Pressure sensors

Display

Display unit 3 x LED green
Switching status 2 x LED yellow
Function display 4-digit alphanumeric display
Measured values 4-digit alphanumeric display

Electrical connection

Connection

M12 connector; gold-plated contacts

Wiring

Programming of the output function

-----OUT1-----

Hno = hysteresis / normally open
Hnc = hysteresis / normally closed
Fno = window function / normally open

Fnc = window function / normally closed

-----OUT2-----

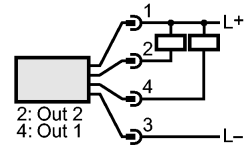
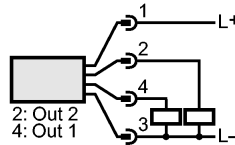
Hno = hysteresis / normally open
Hnc = hysteresis / normally closed
Fno = window function / normally open

Fnc = window function / normally closed

dESI = diagnostic function (normally closed)

Factory setting:

OUT1 = Hno
OUT2 = dESI



Remarks

Remarks

1) to EN50178, SELV, PELV
*) linearity, incl. hysteresis and repeatability;
(limit value setting to DIN 16086)
**) with temperature fluctuations < 10 K
***) in% of the span / 6 months

Pack quantity

[piece]

1